

#9/C

SEQUENCE LISTING

<110> BEELEY, NIGEL ROBERT ARNOLD
PRICKETT, KATHRYN S.
BHAVSAR, SUNIL

<120> USE OF EXENDINS AND AGONISTS THEREOF FOR
THE REDUCTION OF FOOD INTAKE

<130> 231/181

<140> US 09/003,869

<141> 1998-01-07

<150> US 60/034,905

<151> 1997-01-07

<150> US 60/055,404

<151> 1997-08-08

<150> US 60/065,442

<151> 1997-11-14

<150> US 60/066,029

<151> 1997-11-14

<160> 188

<170> FastSEQ for Windows Version 3.0

<210> 1

<211> 39

<212> PRT

<213> Heloderma horridum

<220>

<221> AMIDATION

<222> (39)...(39)

<223> amidated Ser (Serinamide)

His Ser Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

```

<220>
<221> AMIDATION
<222> (39)...(39)
<223> amidated Ser (Serinamide)

```

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

<220>
<223> artificially synthesized sequence of novel exendin agonist compound

```
<220>
<221> VARIANT
<222> (1)...(8)
<223> Xaa in position 1 is His, Arg or Tyr; Xaa in position 2 is
      Ser, Gly, Ala or Thr; Xaa in position 3 is Asp or Glu;
      Xaa in position 6 is Phe, Tyr or naphthylalanine; Xaa in
      position 7 is Thr or Ser; Xaa in position 8 is Ser or Thr;
```

<220>
 <221> VARIANT
 <222> (9)...(22)
 <223> Xaa in position 9 is Asp or Glu; Xaa in position 10 is Leu, Ile, Val, pentylglycine or Met; Xaa in position 14 is Leu, Ile, pentylglycine, Val or Met; Xaa in position 22 is Phe, Tyr or naphthylalanine;

<220>
 <221> VARIANT
 <222> (23)...(25)
 <223> Xaa in position 23 is Ile, Val, Leu, pentylglycine, tert-butylglycine or Met; Xaa in position 24 is Glu or Asp; Xaa in position 25 is Trp, Phe, Tyr, or naphthylalanine;

<220>
 <221> VARIANT
 <222> (31)...(40)
 <223> Xaa in positions 31, 36, 37 and 38 are independently Pro, homoproline, 3-hydroxyproline, 4-hydroxyproline, thioproline, N-alkylglycine, N-alkylpentylglycine or N-alkylalanine; Xaa in position 39 is Ser, Thr or Tyr;

<220>
 <221> VARIANT
 <222> (40)...(40)
 <223> Xaa in position 40 is -OH or -NH₂; with the proviso that the compound is not exendin-3 or exindin-4.

<400> 3

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Xaa | Xaa | Gly | Thr | Xaa | Xaa | Xaa | Xaa | Xaa | Ser | Lys | Gln | Xaa | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Ala | Val | Arg | Leu | Xaa | Xaa | Xaa | Xaa | Leu | Lys | Asn | Gly | Gly | Xaa | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Gly | Ala | Xaa | Xaa | Xaa | Xaa | Xaa | | | | | | | | |
| | | | 35 | | | | 40 | | | | | | | | |

<210> 4
 <211> 29
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> VARIANT
 <222> (1)...(7)
 <223> Xaa in position 1 is His, Arg or Tyr; Xaa in position 2 is Ser, Gly, Ala or Thr; Xaa in position 3 is Asp or Glu; Xaa in position 5 is Ala or Thr; Xaa in position 6 is Ala, Phe, Tyr or naphthylalanine; Xaa in position 7 is Thr or Ser;

<220>
 <221> VARIANT
 <222> (8)...(13)
 <223> Xaa in position 8 is Ala, Ser or Thr; Xaa in position 9 is Asp or Glu; Xaa in position 10 is Ala, Leu, Ile, Val, pentylglycine or Met; Xaa in position 11 is Ala or Ser; Xaa in position 12 is Ala or Lys; Xaa in position 13 is Ala or Gln;

<220>
 <221> VARIANT
 <222> (14)...(20)
 <223> Xaa in position 14 is Ala, Leu, Ile, pentylglycine, Val or Met; Xaa in position 15 is Ala or Glu; Xaa in position 16 is Ala or Glu; Xaa in position 17 is Ala or Glu; Xaa in position 19 is Ala or Val; Xaa in position 20 is Ala or Arg;

<220>
 <221> VARIANT
 <222> (21)...(24)
 <223> Xaa in position 21 is Ala or Leu; Xaa in position 22 is Ala, Phe, Tyr or naphthylalanine; Xaa in position 23 is Ile, Val, Leu, pentylglycine, tert-butylglycine or Met; Xaa in position 24 is Ala, Glu or Asp;

<220>
 <221> VARIANT
 <222> (25)...(28)
 <223> Xaa in position 25 is Ala, Trp, Phe, Tyr or naphthylalanine; Xaa in position 26 is Ala or Leu; Xaa in position 27 is Ala or Lys; Xaa in position 28 is Ala or Asn;

<220>
 <221> VARIANT
 <222> (29)...(29)
 <223> Xaa in position 29 is -OH; -NH₂, Gly-Z₂, Gly Gly-Z₂, Gly Gly Xaa₃₁-Z₂, Gly Gly Xaa₃₁ Ser-Z₂, Gly Gly Xaa₃₁ Ser Ser-Z₂, Gly Gly Xaa₃₁ Ser Ser Gly-Z₂, Gly Gly Xaa₃₁ Ser Ser Gly Ala-Z₂, Gly Gly Xaa₃₁ Ser Ser Gly Ala Xaa₃₆-Z₂;

<220>
 <221> VARIANT
 <222> (29)...(29)
 <223> Gly Gly Xaa₃₁ Ser Ser Gly Ala Xaa₃₆ Xaa₃₇-Z₂; or Gly Gly Xaa₃₁ Ser Ser Gly Ala Xaa₃₆ Xaa₃₇ Xaa₃₈-Z₂;

<220>

<221> VARIANT

<222> (29)...(29)

<223> where Xaa₃₁, Xaa₃₆, Xaa₃₇ and Xaa₃₈ are independently Pro, homoproline, 3-hydroxyproline, 4-hydroxyproline, thioproline, N-alkylglycine, N-alkylpentylglycine or N-alkylalanine; and Z₂ is -OH or -NH₂;

<220>

<221> VARIANT

<222> (3)...(28)

<223> provided that no more than three of Xaa in positions 3, 5, 6, 8, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 24, 25, 26, 27 and 28 are Ala.

<400> 4

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Xaa | Xaa | Gly | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa |
| 1 | | | | 5 | | | | 10 | | | | | | | 15 | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Ala | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa |
| | | | 20 | | | | | 25 | | | | | | | | |

<210> 5

<211> 29

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> VARIANT

<222> (1)...(5)

<223> Xaa in position 1 is His, Arg, Tyr, Ala, Norval, Val or Norleu; Xaa in position 2 is Ser, Gly, Ala or Thr; Xaa in position 3 is Ala, Asp or Glu; Xaa in position 4 is Ala, Norval, Val, Norleu or Gly; Xaa in position 5 is Ala or Thr;

<220>

<221> VARIANT

<222> (6)...(10)

<223> Xaa in position 6 is Phe, Tyr or naphthylalanine; Xaa in position 7 is Thr or Ser; Xaa in position 8 is Ala, Ser or Thr; Xaa in position 9 is Ala, Norval, Val, Norleu, Asp or Glu; Xaa in position 10 is Ala, Leu, Ile, Val, pentylglycine or Met;

<220>
 <221> VARIANT
 <222> (11)...(16)
 <223> Xaa in position 11 is Ala or Ser; Xaa in position 12 is Ala or Lys; Xaa in position 13 is Ala or Gln; Xaa in position 14 is Ala, Leu, Ile, pentylglycine, Val or Met; Xaa in position 15 is Ala or Glu; Xaa in position 16 is Ala or Glu;

<220>
 <221> VARIANT
 <222> (17)...(22)
 <223> Xaa in position 17 is Ala or Glu; Xaa in position 19 is Ala or Val; Xaa in position 20 is Ala or Arg; Xaa in position 21 is Ala or Leu; Xaa in position 22 is Phe, Tyr or naphthylalanine;

<220>
 <221> VARIANT
 <222> (23)...(26)
 <223> Xaa in position 23 is Ile, Val, Leu, pentylglycine, tert-butylglycine or Met; Xaa in position 24 is Ala, Glu or Asp; Xaa in position 25 is Ala, Trp, Phe, Tyr or naphthylalanine; Xaa in position 26 is Ala or Leu;

<220>
 <221> VARIANT
 <222> (27)...(29)
 <223> Xaa in position 27 is Ala or Lys; Xaa in position 28 is Ala or Asn; Xaa in position 29 is -OH, -NH₂, Gly-Z₂, Gly Gly-Z₂, Gly Gly Xaa₃₁-Z₂, Gly Gly Xaa₃₁ Ser-Z₂, Gly Gly Xaa₃₁ Ser Ser-Z₂, Gly Gly Xaa₃₁ Ser Ser Gly-Z₂, Gly Gly Xaa₃₁ Ser Ser Gly Ala-Z₂,

<220>
 <221> VARIANT
 <222> (29)...(29)
 <223> Gly Gly Xaa₃₁ Ser Ser Gly Ala Xaa₃₆-Z₂, Gly Gly Xaa₃₁ Ser Ser Gly Ala Xaa₃₆ Xaa₃₇-Z₂, Gly Gly Xaa₃₁ Ser Ser Gly Ala Xaa₃₆ Xaa₃₇ Xaa₃₈-Z₂ or Gly Gly Xaa₃₁ Ser Ser Gly Ala Xaa₃₆ Xaa₃₇ Xaa₃₈ Xaa₃₉-Z₂;

<220>
 <221> VARIANT
 <222> (29)...(29)
 <223> wherein Xaa₃₁, Xaa₃₆, Xaa₃₇ and Xaa₃₈ are independently Pro, homoproline, 3-hydroxyproline, 4-hydroxyproline, thioproline, N-alkylglycine, N-alkylpentylglycine or N-alkylalanine; and Z₂ is -OH or -NH₂;

<220>
 <221> VARIANT
 <222> (3)...(28)
 <223> provided that no more than three of Xaa in positions 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 24, 25, 26 27 and 28 are Ala;

<220>

<221> VARIANT

<222> (1)...(5)

<223> and provided also that, if Xaa in position 1 is His, Arg or Tyr, then at least one of Xaa in positions 3, 4 and 9 is Ala.

<400> 5

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa |
| 1 | | | | 5 | | | | | 10 | | | | | | 15 | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Xaa | Ala | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa | Xaa |
| | | | 20 | | | | | 25 | | | | | | | | |

<210> 6

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (30)...(30)

<223> amidated Gly (Glycinamide)

<400> 6

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly |
| | | | 20 | | | | | 25 | | | | | 30 |

<210> 7

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (30)...(30)
 <223> amidated Gly (Glycinamide)

<400> 7

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly |
| | | | 20 | | | | 25 | | | | | 30 | |

<210> 8
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 8

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Ala | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 9
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (39)...(39)
 <223> amidated Ser (Serinamide)

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

```
<210> 10
<211> 39
<212> PRT
<213> Artificial Sequence
```

<220>
<223> artificially synthesized sequence of novel exendin agonist compound

```
<220>
<221> AMIDATION
<222> (39)...(39)
<223> amidated Ser (Serinamide)
```

<400> 10

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro Ser
35

```
<210> 11
<211> 39
<212> PRT
<213> Artificial Sequence
```

<220>
<223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (39)...(39)
 <223> amidated Ser (Serinamide)

<400> 11

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
 20 25 30

Ser Gly Ala Pro Pro Pro Ser
 35

<210> 12
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist
 compound

<220>
 <221> AMIDATION
 <222> (39)...(39)
 <223> amidated Ser (Serinamide)

<400> 12

Tyr Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
 20 25 30

Ser Gly Ala Pro Pro Pro Ser
 35

<210> 13
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (39)...(39)

<223> amidated Tyr (Tyrosinamide)

<400> 13

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gly | Ala | Pro | Pro | Pro | Tyr |
| | | | 35 | | | |

<210> 14

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (39)...(39)

<223> amidated Ser (Serinamide)

<400> 14

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gly | Ala | Pro | Pro | Pro | Ser |
| | | | 35 | | | |

<210> 15
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in position 6 stands for naphthylalanine.

<220>
 <221> AMIDATION
 <222> (39)...(39)
 <223> amidated Ser (Serinamide)

<400> 15

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Xaa | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | 25 | | | | | 30 | | | |

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gly | Ala | Pro | Pro | Pro | Ser |
| | | | 35 | | | |

<210> 16
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (39)...(39)
 <223> amidated Ser (Serinamide)

<400> 16

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Ser | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | 25 | | | | | 30 | | | |

Ser Gly Ala Pro Pro Pro Ser
35

<210> 17
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> artificially synthesized sequence of novel exendin agonist
compound

<220>
<221> AMIDATION
<222> (39)...(39)
<223> amidated Ser (Serinamide)

<400> 17

His Gly Glu Gly Thr Phe Ser Thr Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 18
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> artificially synthesized sequence of novel exendin agonist
compound

<220>
<221> AMIDATION
<222> (39)...(39)
<223> amidated Ser (Serinamide)

<400> 18

His Gly Glu Gly Thr Phe Thr Thr Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
 20 25 30

Ser Gly Ala Pro Pro Pro Ser
 35

<210> 19
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist
 compound

<220>
 <221> AMIDATION
 <222> (39)...(39)
 <223> amidated Ser (Serinamide)

<400> 19

His Gly Glu Gly Thr Phe Thr Ser Glu Leu Ser Lys Gln Met Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
 20 25 30

Ser Gly Ala Pro Pro Pro Ser
 35

<210> 20
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist
 compound

<220>
 <223> Xaa in position 10 stands for pentylglycine.

<220>
 <221> AMIDATION
 <222> (39)...(39)
 <223> amidated Ser (Serinamide)

<400> 20

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Xaa | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Gly | Ala | Pro | Pro | Pro | Ser | | | | | | | | | |
| | | | 35 | | | | | | | | | | | | |

<210> 21

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<223> Xaa in position 10 stands for pentylglycine.

<220>

<221> AMIDATION

<222> (39)...(39)

<223> amidated Ser (Serinamide)

<400> 21

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Xaa | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Gly | Ala | Pro | Pro | Pro | Ser | | | | | | | | | |
| | | | 35 | | | | | | | | | | | | |

<210> 22

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<223> Xaa in position 14 stands for pentylglycine.

<220>

<221> AMIDATION

<222> (39)...(39)

<223> amidated Ser (Serinamide)

<400> 22

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Xaa | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| | | | | | | | | | | | | | | | |
| Ser | Gly | Ala | Pro | Pro | Pro | Ser | | | | | | | | | |
| | | | 35 | | | | | | | | | | | | |

<210> 23

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<223> Xaa in position 14 stands for pentylglycine.

<220>

<221> AMIDATION

<222> (39)...(39)

<223> amidated Ser (Serinamide)

<400> 23

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Xaa | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| | | | | | | | | | | | | | | | |
| Ser | Gly | Ala | Pro | Pro | Pro | Ser | | | | | | | | | |
| | | | 35 | | | | | | | | | | | | |

<210> 24
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in position 22 stands for naphthylalanine.

<220>
 <221> AMIDATION
 <222> (39)...(39)
 <223> amidated Ser (Serinamide)

<400> 24

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Xaa | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | 25 | | | | | 30 | | | |

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gly | Ala | Pro | Pro | Pro | Ser |
| | | | 35 | | | |

<210> 25
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (39)...(39)
 <223> amidated Ser (Serinamide)

<400> 25

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Val | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | 25 | | | | | 30 | | | |

Ser Gly Ala Pro Pro Pro Ser
35

<210> 26
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> artificially synthesized sequence of novel exendin agonist compound

<220>
<221> AMIDATION
<222> (39)...(39)
<223> amidated Ser (Serinamide)

<400> 26

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Val Glu Phe Leu Lys Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 27
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> artificially synthesized sequence of novel exendin agonist compound

<220>
<223> Xaa in position 23 stands for tertiary-butylglycine.

<220>
<221> AMIDATION
<222> (39)...(39)
<223> amidated Ser (Serinamide)

<400> 27

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Xaa | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | 25 | | | | | | 30 | | |

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gly | Ala | Pro | Pro | Pro | Ser |
| | | | 35 | | | |

<210> 28

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<223> Xaa in position 23 stands for tertiary-butylglycine.

<220>

<221> AMIDATION

<222> (39)...(39)

<223> amidated Ser (Serinamide)

<400> 28

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Xaa | Glu | Phe | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | 25 | | | | | | 30 | | |

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gly | Ala | Pro | Pro | Pro | Ser |
| | | | 35 | | | |

<210> 29

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (39)...(39)
 <223> amidated Ser (Serinamide)

<400> 29

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Asp | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gly | Ala | Pro | Pro | Pro | Ser |
| | | | 35 | | | |

<210> 30
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (39)...(39)
 <223> amidated Ser (Serinamide)

<400> 30

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gly | Ala | Pro | Pro | Pro | Ser |
| | | | 35 | | | |

<210> 31
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in positions 31, 36, 37 and 38 stands for thioproline.

<220>
 <221> AMIDATION
 <222> (39)...(39)
 <223> amidated Ser (Serinamide)

<400> 31

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Xaa | Ser |
| | | | 20 | | | | | 25 | | | | | | 30 | |

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gly | Ala | Xaa | Xaa | Xaa | Ser |
| | | | 35 | | | |

<210> 32
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in positions 36, 37 and 38 stands for thioproline.

<220>
 <221> AMIDATION
 <222> (39)...(39)
 <223> amidated Ser (Serinamide)

<400> 32

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | | 30 | |

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gly | Ala | Xaa | Xaa | Xaa | Ser |
| | | | 35 | | | |

<210> 33
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in positions 31, 36, 37 and 38 stands for homoproline.

<220>
 <221> AMIDATION
 <222> (39)...(39)
 <223> amidated Ser (Serinamide)

<400> 33

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Xaa | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gly | Ala | Xaa | Xaa | Xaa | Ser |
| | | | 35 | | | |

<210> 34
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in positions 36, 37 and 38 stands for homoproline.

<220>
 <221> AMIDATION
 <222> (39)...(39)
 <223> amidated Ser (Serinamide)

<400> 34

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
 20 25 30

Ser Gly Ala Xaa Xaa Xaa Ser
 35

<210> 35
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist
 compound

<220>
 <223> Xaa in positions 31, 36, 37 and 38 stands for thioproline.

<220>
 <221> AMIDATION
 <222> (39)...(39)
 <223> amidated Ser (Serinamide)

<400> 35

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Xaa Ser
 20 25 30

Ser Gly Ala Xaa Xaa Xaa Ser
 35

<210> 36
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist
 compound

<220>
 <223> Xaa in positions 31, 36, 37 and 38 stands for homoproline.

<220>
 <221> AMIDATION
 <222> (39)...(39)
 <223> amidated Ser (Serinamide)

<400> 36

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Xaa Ser
 20 25 30

Ser Gly Ala Xaa Xaa Xaa Ser
 35

<210> 37
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist
 compound

<220>
 <223> Xaa in positions 31, 36, 37 and 38 stands for n-methylalanine.

<220>
 <221> AMIDATION
 <222> (39)...(39)
 <223> amidated Ser (Serinamide)

<400> 37

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser
 20 25 30

Ser Gly Ala Xaa Xaa Xaa Ser
 35

<210> 38
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in positions 36, 37 and 38 stands for n-methylalanine.

<220>
 <221> AMIDATION
 <222> (39)...(39)
 <223> amidated Ser (Serinamide)

<400> 38

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gly | Ala | Xaa | Xaa | Xaa | Ser |
| | | | 35 | | | |

<210> 39
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in positions 31, 36, 37 and 38 stands for n-methylalanine.

<220>
 <221> AMIDATION
 <222> (39)...(39)
 <223> amidated Ser (Serinamide)

<400> 39

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | Gly | Gly | Xaa | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gly | Ala | Xaa | Xaa | Xaa | Ser |
| | | | 35 | | | |

<210> 40
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 40

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 41
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 41

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 42
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 42

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Ala | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 43
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 43

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Ala | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 44
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 44

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Ala | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 45
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 45

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ala | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 46
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 46

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Ala | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 47
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 47

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ala | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 48
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 48

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Ala | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | | | | |
| | | | 20 | | | | | 25 | | | | | | | |

<210> 49

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 49

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Ala | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | | | | |
| | | | 20 | | | | | 25 | | | | | | | |

<210> 50

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 50

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Ala | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 51

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 51

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Ala | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 52

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 52

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Ala |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 53

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 53

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 54

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 54

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Ala | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 55

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 55

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Ala | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 56

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 56

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

Glu Ala Val Arg Ala Phe Ile Glu Phe Leu Lys Asn
20 25

<210> 57

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist
compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 57

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Ala Phe Leu Lys Asn
20 25

<210> 58

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist
compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 58

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Ala Leu Lys Asn
20 25

<210> 59
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 59

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Ala | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 60
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 60

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Ala | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 61
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Ala (Alaninamide)

<400> 61

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Ala |
| | | | 20 | | | | 25 | | | | |

<210> 62
 <211> 38
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (38)...(38)
 <223> amidated Pro (Prolinamide)

<400> 62

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | 25 | | | | | 30 | | | |

| | | | | | |
|-----|-----|-----|-----|-----|-----|
| Ser | Gly | Ala | Pro | Pro | Pro |
| | | | 35 | | |

<210> 63
 <211> 38
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (38)...(38)
 <223> amidated Pro (Prolinamide)

<400> 63

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Gly | Ala | Pro | Pro | Pro | | | | | | | | | | |
| | | | 35 | | | | | | | | | | | | |

<210> 64
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (37)...(37)
 <223> amidated Pro (Prolinamide)

<400> 64

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Gly | Ala | Pro | Pro | | | | | | | | | | | |
| | | | 35 | | | | | | | | | | | | |

<210> 65
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (37)...(37)
 <223> amidated Pro (Prolinamide)

<400> 65

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Gly | Ala | Pro | Pro | | | | | | | | | | | |
| | | | 35 | | | | | | | | | | | | |

<210> 66
 <211> 36
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (36)...(36)
 <223> amidated Pro (Prolinamide)

<400> 66

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Gly | Ala | Pro | | | | | | | | | | | | |
| | | | 35 | | | | | | | | | | | | |

<210> 67
 <211> 36
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (36)...(36)
 <223> amidated Pro (Prolinamide)

<400> 67

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Gly | Ala | Pro | | | | | | | | | | | | |
| | | | 35 | | | | | | | | | | | | |

<210> 68
 <211> 35
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (35)...(35)
 <223> amidated Ala (Alaninamide)

<400> 68

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Gly | Ala | | | | | | | | | | | | | |
| | | | 35 | | | | | | | | | | | | |

<210> 69
 <211> 35
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (35)...(35)
 <223> amidated Ala (Alaninamide)

<400> 69

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Gly | Ala | | | | | | | | | | | | | |
| | | | 35 | | | | | | | | | | | | |

<210> 70
 <211> 34
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (34)...(34)
 <223> amidated Gly (Glycinamide)

<400> 70

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Gly | | | | | | | | | | | | | | |

<210> 71
 <211> 34
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (34)...(34)
 <223> amidated Gly (Glycinamide)

<400> 71

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |

Ser Gly

<210> 72
 <211> 33
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (33)...(33)
 <223> amidated Ser (Serinamide)

<400> 72

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |

Ser

<210> 73
 <211> 33
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (33)...(33)
 <223> amidated Ser (Serinamide)

<400> 73

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |

Ser

<210> 74
 <211> 32
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (32)...(32)
 <223> amidated Ser (Serinamide)

<400> 74

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |

<210> 75
 <211> 32
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (32)...(32)
 <223> amidated Ser (Serinamide)

<400> 75

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |

<210> 76
 <211> 31
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (31)...(31)
 <223> amidated Pro (Prolinamide)

<400> 76

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | |
| | | | 20 | | | | | 25 | | | | | 30 | | |

<210> 77
 <211> 31
 <212> PRT
 <213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (31)...(31)

<223> amidated Pro (Prolinamide)

<400> 77

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | Gly | Gly | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | |

<210> 78

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (30)...(30)

<223> amidated Gly (Glycinamide)

<400> 78

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | Gly | Gly |
| | | | 20 | | | | | 25 | | | | | 30 |

<210> 79

<211> 29

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (29)...(29)
 <223> amidated Gly (Glycinamide)

<400> 79

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly |
| | | | 20 | | | | 25 | | | | | |

<210> 80
 <211> 29
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (29)...(29)
 <223> amidated Gly (Glycinamide)

<400> 80

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | Gly |
| | | | 20 | | | | 25 | | | | | |

<210> 81
 <211> 38
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in positions 31, 36, 37 and 38 stand for thioproline.

<220>
 <221> AMIDATION
 <222> (38)...(38)
 <223> amidated tPro (thioprolinamide)

<400> 81

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Xaa | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| | | | | | | | | | | | | | | | |
| Ser | Gly | Ala | Xaa | Xaa | Xaa | | | | | | | | | | |
| | | | 35 | | | | | | | | | | | | |

<210> 82
 <211> 38
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in positions 36, 37 and 38 stand for thioproline.

<220>
 <221> AMIDATION
 <222> (38)...(38)
 <223> amidated tPro (thioprolinamide)

<400> 82

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| | | | | | | | | | | | | | | | |
| Ser | Gly | Ala | Xaa | Xaa | Xaa | | | | | | | | | | |
| | | | 35 | | | | | | | | | | | | |

<210> 83
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in position 31 stands for n-methylalanine.

<220>
 <221> AMIDATION
 <222> (37)...(37)
 <223> amidated Pro (Prolinamide)

<400> 83

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Xaa | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |

| | | | | |
|-----|-----|-----|-----|-----|
| Ser | Gly | Ala | Pro | Pro |
| | | | 35 | |

<210> 84
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in positions 31, 36 and 37 stands for n-methylalanine.

<220>
 <221> AMIDATION
 <222> (37)...(37)
 <223> amidated Nmeala (n-methylalaninamide)

<400> 84

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser
 20 25 30

Ser Gly Ala Xaa Xaa
 35

<210> 85
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist
 compound

<220>
 <223> Xaa in positions 31, 36 and 37 stands for homoproline.

<220>
 <221> AMIDATION
 <222> (37)...(37)
 <223> amidated hPro (homoprolinamide)

<400> 85

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser
 20 25 30

Ser Gly Ala Xaa Xaa
 35

<210> 86
 <211> 36
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist
 compound

<220>
 <223> Xaa in positions 31 and 36 stands for homoproline.

<220>
 <221> AMIDATION
 <222> (36)...(36)
 <223> amidated hPro (homoprolinamide)

<400> 86

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Xaa | Ser |
| | | | 20 | | | | 25 | | | | | | 30 | | |

| | | | |
|-----|-----|-----|-----|
| Ser | Gly | Ala | Xaa |
| | | | 35 |

<210> 87
 <211> 35
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (35)...(35)
 <223> amidated Ala (Alaninamide)

<400> 87

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | 25 | | | | | | 30 | | |

| | | |
|-----|-----|-----|
| Ser | Gly | Ala |
| | | 35 |

<210> 88
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (30)...(30)

<223> amidated Gly (Glycinamide)

<400> 88

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly |
| | | | 20 | | | | | 25 | | | | | 30 |

<210> 89

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<223> Xaa in position 6 stands for naphthylalanine.

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 89

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Xaa | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | | 25 | | | |

<210> 90

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 90

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Ser | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 91

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 91

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Ser | Thr | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 92

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 92

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Glu | Leu | Ser | Lys | Gln | Met | Ala | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 93

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<223> Xaa in position 10 stands for pentylglycine.

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 93

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Xaa | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 94

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<223> Xaa in position 22 stands for naphthylalanine.

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 94

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Xaa | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | | | 25 | | |

<210> 95

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<223> Xaa in position 23 stands for tertiary-butylglycine.

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 95

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Xaa | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | | | 25 | | |

<210> 96
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 96

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Asp | Phe | Leu | Lys | Asn |
| | | | 20 | | | | | 25 | | | |

<210> 97
 <211> 33
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (33)...(33)
 <223> amidated Ser (Serinamide)

<400> 97

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Ala | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |

Ser

<210> 98
 <211> 29
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (29)...(29)
 <223> amidated Gly (Glycinamide)

<400> 98

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Ala | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | | | |
| | | | 20 | | | | | 25 | | | | | | | |

<210> 99
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in positions 31, 36 and 37 stands for homoproline.

<220>
 <221> AMIDATION
 <222> (37)...(37)
 <223> amidated hPro (homoprolinamide)

<400> 99

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Ala | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Xaa | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |

| | | | | |
|-----|-----|-----|-----|-----|
| Ser | Gly | Ala | Xaa | Xaa |
| | | | 35 | |

<210> 100
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 100

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | | | 25 | | |

<210> 101
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 101

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Ala | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | | | 25 | | |

<210> 102
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 102

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Ala | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | | | | |
| | | | 20 | | | | | 25 | | | | | | | |

<210> 103
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 103

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Ala | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | | | | |
| | | | 20 | | | | | 25 | | | | | | | |

<210> 104
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 104

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 105
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 105

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Ala | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 106
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 106

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Ala | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 107

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 107

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Ala | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 108

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>
<221> AMIDATION
<222> (28)...(28)
<223> amidated Asn (Asparaginamide)

<400> 108

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Ala | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 109
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> artificially synthesized sequence of novel exendin agonist compound

<220>
<221> AMIDATION
<222> (28)...(28)
<223> amidated Asn (Asparaginamide)

<400> 109

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ala | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 110
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 110

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ala | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 111
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 111

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 112
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
<221> AMIDATION
<222> (28)...(28)
<223> amidated Asn (Asparaginamide)

<400> 112

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | | | 25 | | |

<210> 113
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> artificially synthesized sequence of novel exendin agonist compound

<220>
<221> AMIDATION
<222> (28)...(28)
<223> amidated Asn (Asparaginamide)

<400> 113

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Ala | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | | | 25 | | |

<210> 114
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 114

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Ala | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 115
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in position 6 stands for naphthylalanine.

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 115

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Xaa | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 116
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Xaa in position 6 stands for naphthylalanine.

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 116

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Xaa | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 117

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 117

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Ser | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 118

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 118

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Ser | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | | | 25 | | |

<210> 119

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 119

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ala | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | | | 25 | | |

<210> 120

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 120

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ala | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | | 25 | | | |

<210> 121

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 121

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Ala | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | | 25 | | | |

<210> 122

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 122

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Ala | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 123

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 123

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Glu | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 124

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 124

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Glu | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 125

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 125

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Ala | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 126

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 126

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Ala | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 127

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<223> Xaa in position 10 stands for pentylglycine.

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 127

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Xaa | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 128

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<223> Xaa in position 10 stands for pentylglycine.

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 128

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Xaa | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | | | 25 | | |

<210> 129

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 129

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ala | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | | | 25 | | |

<210> 130
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 130

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ala | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | | | | |
| | | | 20 | | | | | | 25 | | | | | | |

<210> 131
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 131

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Ala | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | | | | |
| | | | 20 | | | | | | 25 | | | | | | |

<210> 132
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 132

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Ala | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | | | 25 | | |

<210> 133
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 133

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Ala | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | | | 25 | | |

<210> 134
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 134

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Ala | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 135
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 135

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Ala | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 136
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 136

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Ala | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | | | | |
| | | | 20 | | | | | 25 | | | | | | | |

<210> 137
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in position 14 stands for pentylglycine.

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 137

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Xaa | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | | | | |
| | | | 20 | | | | | 25 | | | | | | | |

<210> 138
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in position 14 stands for pentylglycine.

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 138

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Xaa | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | | | 25 | | |

<210> 139
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 139

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Ala | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | | | 25 | | |

<210> 140
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 140

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Ala | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 141
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 141

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Ala |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 142
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 142

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Ala |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | | | | |
| | | | 20 | | | | | 25 | | | | | | | |

<210> 143
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 143

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Ala | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | | | | |
| | | | 20 | | | | | 25 | | | | | | | |

<210> 144
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 144

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | | 25 | | | |

<210> 145
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 145

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Ala | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | | 25 | | | |

<210> 146
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 146

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Ala | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | | 25 | | | |

<210> 147
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 147

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Ala | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | | 25 | | | |

<210> 148
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 148

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Ala | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | | 25 | | | |

<210> 149
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 149

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Ala | Phe | Ile | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | | 25 | | | |

<210> 150
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 150

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Glu | Ala | Val | Arg | Ala | Phe | Ile | Glu | Phe | Leu | Lys | Asn | | | | |
| | | | 20 | | | | | 25 | | | | | | | |

<210> 151
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in position 22 stands for naphthylalanine.

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 151

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Glu | Ala | Val | Arg | Leu | Xaa | Ile | Glu | Trp | Leu | Lys | Asn | | | | |
| | | | 20 | | | | | 25 | | | | | | | |

<210> 152
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in position 22 stands for naphthylalanine.

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 152

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Xaa | Ile | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | | | 25 | | |

<210> 153
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 153

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Val | Glu | Trp | Leu | Lys | Asn |
| | | | 20 | | | | | | 25 | | |

<210> 154
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 154

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Glu | Ala | Val | Arg | Leu | Phe | Val | Glu | Phe | Leu | Lys | Asn | | | | |
| | | | 20 | | | | | 25 | | | | | | | |

<210> 155
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in position 23 stands for tertiary-butylglycine.

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 155

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Glu | Ala | Val | Arg | Leu | Phe | Xaa | Glu | Trp | Leu | Lys | Asn | | | | |
| | | | 20 | | | | | 25 | | | | | | | |

<210> 156
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in position 23 stands for tertiary-butylglycine.

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 156

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Xaa | Glu | Phe | Leu | Lys | Asn |
| | | | 20 | | | | | | 25 | | |

<210> 157
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 157

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Asp | Trp | Leu | Lys | Asn |
| | | | 20 | | | | | | 25 | | |

<210> 158
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 158

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Asp | Phe | Leu | Lys | Asn | | | | |
| | | | 20 | | | | | 25 | | | | | | | |

<210> 159
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 159

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Ala | Leu | Lys | Asn | | | | |
| | | | 20 | | | | | 25 | | | | | | | |

<210> 160
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> artificially synthesized sequence of novel exendin agonist
compound

<220>
<221> AMIDATION
<222> (28)...(28)
<223> amidated Asn (Asparaginamide)

<400> 160

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Ala | Leu | Lys | Asn |
| | | | 20 | | | | | 25 | | | |

<210> 161
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> artificially synthesized sequence of novel exendin agonist
compound

<220>
<221> AMIDATION
<222> (28)...(28)
<223> amidated Asn (Asparaginamide)

<400> 161

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Ala | Lys | Asn |
| | | | 20 | | | | | 25 | | | |

<210> 162
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 162

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Ala | Lys | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 163
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 163

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Ala | Asn |
| | | | 20 | | | | 25 | | | | |

<210> 164
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 164

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Ala | Asn | | | | |
| | | | 20 | | | | | 25 | | | | | | | |

<210> 165
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Ala (Alaninamide)

<400> 165

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Ala | | | | |
| | | | 20 | | | | | 25 | | | | | | | |

<210> 166
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Ala (Alaninamide)

<400> 166

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Asp | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Ala | | | | |
| | | | 20 | | | | | 25 | | | | | | | |

<210> 167
 <211> 38
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (38)...(38)
 <223> amidated Pro (Prolinamide)

<400> 167

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| | | | | | | | | | | | | | | | |
| Ser | Gly | Ala | Pro | Pro | Pro | | | | | | | | | | |
| | | | 35 | | | | | | | | | | | | |

<210> 168
 <211> 38
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (38)...(38)
 <223> amidated Pro (Prolinamide)

<400> 168

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Ala | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Gly | Ala | Pro | Pro | Pro | | | | | | | | | | |
| | | | 35 | | | | | | | | | | | | |

<210> 169
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (37)...(37)
 <223> amidated Pro (Prolinamide)

<400> 169

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Ala | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Gly | Ala | Pro | Pro | | | | | | | | | | | |
| | | | 35 | | | | | | | | | | | | |

<210> 170
 <211> 36
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (36)...(36)
 <223> amidated Pro (Prolinamide)

<400> 170

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Ala | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | 25 | | | | | 30 | | | |
| Ser | Gly | Ala | Pro | | | | | | | | | | | | |
| | | | 35 | | | | | | | | | | | | |

<210> 171
 <211> 36
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (36)...(36)
 <223> amidated Pro (Prolinamide)

<400> 171

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Ala | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | 25 | | | | | 30 | | | |
| Ser | Gly | Ala | Pro | | | | | | | | | | | | |
| | | | 35 | | | | | | | | | | | | |

<210> 172
 <211> 35
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (35)...(35)
 <223> amidated Ala (Alaninamide)

<400> 172

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| | | | | | | | | | | | | | | | |
| Ser | Gly | Ala | | | | | | | | | | | | | |
| | | 35 | | | | | | | | | | | | | |

<210> 173
 <211> 35
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (35)...(35)
 <223> amidated Ala (Alaninamide)

<400> 173

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Ala | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| | | | | | | | | | | | | | | | |
| Ser | Gly | Ala | | | | | | | | | | | | | |
| | | 35 | | | | | | | | | | | | | |

<210> 174
 <211> 34
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (34)...(34)
 <223> amidated Gly (Glycinamide)

<400> 174

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Ala | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |

Ser Gly

<210> 175
 <211> 33
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (33)...(33)
 <223> amidated Ser (Serinamide)

<400> 175

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Ala | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |

Ser

<210> 176
 <211> 32
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (32)...(32)
 <223> amidated Ser (Serinamide)

<400> 176

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |

<210> 177
 <211> 32
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (32)...(32)
 <223> amidated Ser (Serinamide)

<400> 177

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Ala | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |

<210> 178
 <211> 31
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (31)...(31)
 <223> amidated Pro (Prolinamide)

<400> 178

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Ala | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | |
| | | | 20 | | | | | 25 | | | | | 30 | | |

<210> 179
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (30)...(30)
 <223> amidated Gly (Glycinamide)

<400> 179

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Ala | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | Gly | Gly | | |
| | | | 20 | | | | | 25 | | | | | 30 | | |

<210> 180
 <211> 29
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (29)...(29)
 <223> amidated Gly (Glycinamide)

<400> 180

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | Gly |
| | | | 20 | | | | 25 | | | | | |

<210> 181
 <211> 38
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in positions 31, 36, 37 and 38 stand for thioproline.

<220>
 <221> AMIDATION
 <222> (38)...(38)
 <223> amidated tPro (thioprolinamide)

<400> 181

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Ala | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Xaa | Ser |
| | | | 20 | | | | 25 | | | | | 30 | | | |

| | | | | | |
|-----|-----|-----|-----|-----|-----|
| Ser | Gly | Ala | Xaa | Xaa | Xaa |
| | | | 35 | | |

<210> 182
 <211> 38
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in positions 36, 37 and 38 stand for thioproline.

<220>
 <221> AMIDATION
 <222> (38)...(38)
 <223> amidated tPro (thioprolinamide)

<400> 182

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Ala | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |

| | | | | | |
|-----|-----|-----|-----|-----|-----|
| Ser | Gly | Ala | Xaa | Xaa | Xaa |
| | | | 35 | | |

<210> 183
 <211> 37
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in positions 31, 36 and 37 stands for n-methylalanine.

<220>
 <221> AMIDATION
 <222> (37)...(37)
 <223> amidated Nmeala (n-methylalaninamide)

<400> 183

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Ala | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser
 20 25 30

Ser Gly Ala Xaa Xaa
 35

<210> 184
 <211> 36
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist
 compound

<220>
 <223> Xaa in positions 31 and 36 stands for homoproline.

<220>
 <221> AMIDATION
 <222> (36)...(36)
 <223> amidated hPro (homoprolinamide)

<400> 184

Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser
 20 25 30

Ser Gly Ala Xaa
 35

<210> 185
 <211> 35
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist
 compound

<220>
 <221> AMIDATION
 <222> (35)...(35)
 <223> amidated Ala (Alaninamide)

<400> 185

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Ala | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |

| | | |
|-----|-----|-----|
| Ser | Gly | Ala |
| | | 35 |

<210> 186
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (30)...(30)
 <223> amidated Gly (Glycinamide)

<400> 186

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Asp | Ala | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly |
| | | | 20 | | | | | 25 | | | | | 30 |

<210> 187
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (39)...(39)
 <223> amidated Ser (Serinamide)

<400> 187

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Glu | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Met | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Trp | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gly | Ala | Pro | Pro | Pro | Ser |
| | | | 35 | | | |

<210> 188
 <211> 39
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (39)...(39)
 <223> amidated Ser (Serinamide)

<400> 188

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Ala | Gly | Thr | Phe | Thr | Ser | Asp | Leu | Ser | Lys | Gln | Leu | Glu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Val | Arg | Leu | Phe | Ile | Glu | Phe | Leu | Lys | Asn | Gly | Gly | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gly | Ala | Pro | Pro | Pro | Ser |
| | | | 35 | | | |